# Workshop Egyptox–2000: For Better Environmental Education by the Birth of the New Millennium

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"EGYPTOX–2000," a scientific workshop on environmental chemistry and toxicology, was held in Cairo, Egypt, 5–9 February 2000. The workshop was organized by the National Research Centre (NRC), Cairo, Egypt, in collaboration with the United Nations Educational, Scientific and Cultural Organization (UNESCO), and held under the auspice of Mufeed Shehab, the Minister of High Education and Scientific Research.

The scientific program consisted of six sessions with participation of 21 eminent lecturers from Egypt, Turkey, and Australia and covered Environmental Pollution and Management, Toxic Chemicals and Human Genome, Risk Assessment and Hazard Prediction, Aquatic Pollution, Industrial Chemicals and Pollution, and Approaches to Environmental Remediation.

The workshop also included three extended meetings for roundtable discussions, which highlighted Microanalysis of Toxic Chemicals, Principles of Risk/Safety Assessment, and Education, Training, and Research Needs in Environmental Toxicology.

The attendees visited certain industrial companies at 6th October City, Giza, Egypt, and at the El–Fayoum Province with the aim of creating more and stronger connections between scientists and industry staff.

Professors and researchers from universities and different research centers were invited to participate in the activities of the workshop. The major concerns expressed during the workshop were as follows:

- The increasing demand, industrialization, and application of chemicals are currently not confined to the developed countries, but are extended to the developing nations as well.
- Toxicity is a unique biological criterion for each chemical substance, like its physical and chemical criteria. This toxicity may range from myelotoxicity to chronic action, affecting all bioactivities in the human body and the successive generations as well.
- A huge number of chemical substances possess a high degree of stability against environmental degradation factors. This, in turn, represents a real threat to human and animal health, as well as to the natural biological balance.
- Certain chemical substances of natural and/or synthetic origin affect the brain of the embryo (fetus) in its early developmental stages, as well as in newborn children. These negative effects may also extend to the immune and reproductive systems, even with exposure to low doses of these chemicals.
- Industrialization, handling and application of chemicals, and disposal of chemical wastes and residues should be completed according to national strategies, taking into consideration factors of occupational and environmental safety not only in Egypt but also in surrounding countries.
- Egypt and other countries in the region lack integrated and trustworthy databases for necessary information regarding the magnitude and problems associated with the application of chemicals in their environment. This dicourages efforts of the scientists to set up "toxicity maps" for the Middle East Region as well as for the Arabian and African countries.
- Toxicology, as a science, is now fully recognized in the advanced countries as an important branch of environmental issues. Developing countries should make use of recent trends and techniques for monitoring environmental pollutants, assessment of their risks, minimizing their impacts, and remediation of the environment.
- The field visits performed during this workshop clearly showed the importance of arranging regular bilateral meetings between scientists and industry staff. Meetings of this kind would enable both sides to solve different problems of mutual interest.

## Conclusion

The attendees of the Egyptox–2000 Workshop agree that there is a lack of a unique structure on a regional level for environmental chemistry and toxicology, despite the availability of a large number of experts and researchers of high skill and international reputation in this field.

## Recommendations

From this standpoint, the attendees reached the following definite recommendation:

> [We urge] the concerned International Organizations, particularly, the United Nations Educational, Scientific and Cultural Organization (UNESCO) to give their support for establishing a 'Regional Institute for Environmental Chemistry and Toxicology' in Egypt. This, indeed, will be as a 'Center of Excellency' for the benefit of Egypt and the surrounding countries by virtue of the Integrated Reference Laboratories that will be in its structure.

The establishment of this institute will fulfill the following objectives:

- To undertake suitable arrangements and contacts with the concerned international organizations to generalize standard methods for toxicologic assessment, and to spread these methodologies over the scientific centers in the region
- To become better acquainted with modern and up-to-date techniques related to environmental toxicology, to make available their requisites, and to carry out basic and applied research in relation to dynamics of chemicals in the environment, their impact, monitoring, and methods for eliminating their toxic hazards according to circumstances of each country in the region
- To organize symposia, workshops, and training programs; to publish chemical and chemical/environmental information at the local and regional levels; and to exchange knowledge with similar scientific institutions in other parts of the world
- To collect information and establish databases for assigning toxicologic maps for Egypt and for Arabian and African countries
- To offer research activities and technical feasibility studies to concerned authorities in Egypt and the countries of the region that face similar environmental problems because of the continuing increase in application of chemical substances.

The attendees also recommended that the intended Regional Institute for Environmental Chemistry and Toxicology (RIECT) should be established in the 6th October City at Giza.

This promising city occupies a peculiar location and receives increasing industrial growth, and land is available there for establishing the institute.

Because certain executive actions and procedures are required to establish the RIECT, two stages will be needed. Stage 1

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comprises the fulfillment of the initial procedures for establishing the intended institute on a national level. In this stage, the institute would belong to the Ministry of Scientific Research and will be able to start its activities using staff members available at the NRC. Similar procedures have been used in the establishment of other institutions such as the Institute of Theodor Bilharz, the Institute of Petroleum Research, the Institute of Metal Research and Development, and the Institute of Ophthalmology. In Stage 2 necessary actions will be completed for expanding the institute from the national to the regional level.


**Figure 1.** Inauguration of the Egyptox–2000 Workshop at the NRC, Cairo, Egypt. Seated (from left to right): M.M. Omar, representative of UNESCO, Egypt; M. Seif El–Nasr, representative of the Minister of High Education and Scientific Research; S.H. Eissa, President of the NRC; M.M. Sidky, president of the workshop; and S.A. Mansour, Vice President and Secretary General of the workshop.